



## **The Role of Coping and Ethnolinguistic Vitality in Predicting Franco-Ontarian Adolescents' Perceived Stress**

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### Article abstract

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# The Role of Coping and Ethnolinguistic Vitality in Predicting Franco-Ontarian Adolescents' Perceived Stress

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## Abstract

This study investigated the predictive effects of ethnolinguistic vitality and coping strategies on perceived stress in a sample of 267 Canadian adolescents aged 15 to 18 years. An exploratory factor analysis was performed to extract the factors to be used in the regression analysis. For ethnolinguistic vitality, Anglophone language vitality and Francophone language vitality, shopping and media use in English and bilingual identity were extracted. Coping was factored into three main factors: Adaptive Coping, Maladaptive Coping and Seeking Social Support. Adolescents' perceived stress converged into two main factors: Stress Vulnerability and Self-Distrust. Regression results indicated that adaptive coping strategies predicted lower levels of stress vulnerability and self-distrust, whereas maladaptive coping predicted increased levels of these stress factors. Moreover, Anglophone and Francophone language vitality predicted lower levels of adolescents' stress vulnerability above and beyond the effects of coping strategies. These findings attest to the importance of ethnolinguistic vitality in contributing to adolescent well-being.

## Résumé

Cette étude a examiné les effets prédictifs de la vitalité ethnolinguistique et des stratégies d'adaptation sur la perception du stress chez un échantillon de 267 adolescents canadiens entre 15 et 18 ans. Une analyse factorielle exploratoire a été effectuée afin d'extraire des facteurs utilisés pour une analyse de régression. Quant à la vitalité ethnolinguistique, la vitalité linguistique anglophone et la vitalité linguistique francophone, le magasinage (shopping) et l'utilisation des médias en anglais, et l'identité bilingue ont été extraits. Les stratégies d'adaptation ont été pondérées sous trois facteurs dont les stratégies adaptatives, les stratégies maladaptatives et la recherche du soutien social. La perception du stress chez les adolescents converge sous deux facteurs principaux : la vulnérabilité au stress et la méfiance de soi. Ces résultats soulignent l'importance de la vitalité ethnolinguistique à contribuer au bien-être des adolescents.

## Stress and Coping

Stress affects many young people in North America, including Canada, where 12.6% of adolescents ( $n = 280, 200$ ) aged 12 to 18 report that most of their days are either quite stressful or extremely stressful (Statistics Canada, 2017). The negative consequences of stress on the general well-being of adolescents are numerous and include depressive symptoms (Moksnes *et al.*, 2016), emotional distress (Hampel & Petermann, 2006), and other effects on their physical health, such as insomnia and musculoskeletal pain (Wiklund *et al.*, 2012). In addition, chronic stress can lead to the development of risky behaviours, such as smoking and heavy drinking and, in the most extreme cases, suicide (Kirmayer, 2012).

Given the pervasive negative effects of stress on mental health outcomes, it is important to understand the processes that might contribute to adolescents' resilience. Coping has been considered one of the crucial mechanisms in modulating one's reactions to stress (Aldwin, 2007). According to Lazarus and Folkman (1984), adaptive coping strategies can be classified as either problem-focused (*i.e.*, seeking practical strategies to solve a problem at hand) or emotion-focused (*i.e.*, alleviating negative feelings to reduce the emotional impact of the problem). Conversely, maladaptive coping strategies are characterized by destructive behaviour, avoidance and anger (Lazarus & Folkman, 1984).

A metaanalysis and narrative review of 212 studies examining children's and adolescents' coping styles found that broad categories of adaptive coping strategies (conceptualized by the authors in terms of adaptive coping, positive coping, and productive coping) were related to decreased levels of externalizing behaviours (*e.g.*, oppositional and aggressive behaviour), whereas maladaptive coping strategies (*e.g.*, dysfunctional coping, helpless coping, negative coping, and non-productive coping) were related to increased internalizing behaviours (*e.g.*, emotional distress, depressive symptoms; Compas *et al.*, 2017).

Furthermore, in a study conducted with a sample of 285 Canadian Grade 10-12 students (aged 14-20), greater coping resources were related to lower levels of stress and less frequent anxiety symptoms among adolescents. Significant gender differences were also found, with females reporting more intense stress levels than male adolescents. Surprisingly, adolescents reported higher levels of stress and fewer coping resources in comparison to what was generally reported by adults, indicating a particular susceptibility of stressors for this age group (Allen & Hiebert, 1991).

In a more recent study conducted on a sample of 783 French college students, the Brief-COPE (Muller & Spitz, 2003) was used to extract four main profiles of coping styles, each linked to different degrees of perceived stress and health-related behaviours. In this study, students scoring high cognitive restructuring, and low problem solving, support seeking, distraction, and avoidance demonstrate the lowest levels of perceived stress, whereas students

who endorsed moderate problem solving and cognitive restructuring, high support seeking and distraction, and moderate avoidance manifested the highest levels of stress (Doron *et al.*, 2014). These findings highlight the importance of considering the role that different coping styles (or clusters of coping strategies) might play in the prediction of perceived stress among adolescents.

## Ethnolinguistic Vitality

Language is an important social determinant of physical and mental health (Puchala *et al.*, 2013). Some features of the linguistic landscape can contribute to increasing one's sense of togetherness and belonging to the ethnolinguistic community (Landry & Bourhis, 1997). In this regard, ethnolinguistic vitality emerges as a critical aspect of the minority language groups and their survival in the dominant group. Ethnolinguistic vitality "makes a group likely to behave as a distinctive and active collective entity in intergroup situations" (Giles *et al.*, 1977, p. 308). In the literature, two types of this construct have been identified, namely subjective and objective ethnolinguistic vitality. In general, subjective ethnolinguistic vitality refers to one's belief system concerning the group vitality operationalized as the set of cognitions and emotions regulating ingroup identification and intergroup dynamics (Smith *et al.*, 2007). This concept of vitality is distinguished from objective ethnolinguistic vitality, which includes structural aspects of the collective realm such as demography, institutional support, and prestige of the language spoken by a community, which can influence the process of minority language proficiency, maintenance and subcultural identification. Allard and Landry (1994) proposed a hybrid model of ethnolinguistic vitality that "acts as a bridge between the sociological and psychological level of analyses" (p. 121) and includes characteristics of both objective and subjective ethnolinguistic vitality. A key part of their definition of the ethnolinguistic vitality construct is the individual network of linguistic contacts (Allard & Landry, 1994). The authors explain that both the quality and quantity of such network contacts, either within the immediate family or at the societal level (*i.e.*, school, friends, workplace), influence the level of use of the language as well as beliefs and attitudes concerning ethnolinguistic group membership.

Generally, ethnolinguistic vitality has been associated with several positive outcomes, such as motivation to maintain the minority language (Marton *et al.*, 2014), language attitudes (Dragojevic, 2016; Kraemer *et al.*, 1994) and language learning (Marton, *et al.*, 2014). Moreover, it has been shown that the higher the ethnolinguistic vitality the greater the probability the minority group has to emerge as a collective entity and retain its distinct status alongside the dominant culture (Landry *et al.*, 2010). For instance, a study conducted with a sample of 658 Francophone undergraduates from three provinces, namely Ontario, New Brunswick and Quebec, found that all Franco-Canadians reported a stronger will

to enhance their ingroup vitality than the English Canadians. These findings reflect the need of Franco-Canadians to differentiate themselves from the Anglo-dominant group and maintain a strong sense of social identity (Sioufi *et al.*, 2016).

Nonetheless, other studies suggest that Franco-Canadians in a minority language setting demonstrate both high ingroup vitality and strong vitality in the language of the dominant group (Landry *et al.*, 2008). Such a dual process of identification resonates with the concept of hybrid identity, which refers to the integration of components of both Francophone and Anglophone identities as a *mélange* of both cultures. From this perspective, the bilingual identity of Franco-Canadian youth appears as a form of conciliation between their “*francophonie*”, ethnic diversity, and exposure to the dominant language through social interactions with others in the community (Dallaire, 2003).

According to ethnolinguistic theory, the individual’s positive ethnolinguistic identity is an important determinant of their psychological well-being (Smith *et al.*, 2017). This is particularly relevant for minority youth, who are likely to experience heightened stress and psychological problems due to the social stigma associated with their minority status (Huynh & Fuligni, 2012; Tobler *et al.*, 2013). In this context, ethnolinguistic vitality can act as a buffer against mental health issues, also promoting resilience among minority youth (Gueye *et al.*, 2018). In this regard, a recent study conducted with a sample of 378 bilingual Hungarian adolescents (14-18 years) living in Romania shows that those with high ethnolinguistic vitality (*i.e.*, highly involved, and active with their respective ethnolinguistic groups) tended to be more satisfied with their lives compared to those reporting low ethnolinguistic vitality (Dragojevic *et al.*, 2018). Similarly, a recent qualitative study exploring the collective identity profiles of university students of Franco-Manitoban origins identified a group of individuals, classified as “*inquiet* [worried]”, with strong concerns regarding the possibility of losing their Francophone identity and uncertainty regarding perceived cultural continuity. This group reported lower levels of life satisfaction compared to the “*optimistic*” profiles who expressed a positive view of their Francophone identity and their level of engagement in activities to maintain contact with their ethnolinguistic heritage (Levesque & de Moissac, 2018).

In sum, ethnolinguistic vitality plays an important role in determining the level of sociocultural integration of individuals, which in turn can benefit them by reducing the stress associated with being part of a linguistic minority group. In this study, we propose to investigate the relationship among aspects of adolescents’ perceived stress, coping and ethnolinguistic vitality to determine their impact on perceived stress.

## Objectives of the Study and Hypotheses

The first objective of this study is to examine the factor structure of measures of perceived stress, coping and ethnolinguistic vitality in a sample of Francophone adolescents. Given the uniqueness of this sample of Canadian Francophone adolescents, we utilized an exploratory approach for the factor extractions. Thus, no specific hypothesis on the structures of the factors was generated concerning the factor structure of the measurement scales. The second objective is to investigate the predictive effects of coping strategies and ethnolinguistic vitality on perceived stress factors. Given the previous research and the role of adaptive and maladaptive coping strategies (Compas *et al.*, 2017), we hypothesized that adaptive coping strategies would be predictive of less perceived stress among adolescents. Conversely, it is hypothesized that maladaptive coping strategies will predict an increased level of stress among adolescents. Moreover, based on the previous research on the effects of ethnolinguistic vitality on measures of psychological well-being (Dragojevic *et al.*, 2018), we hypothesized that higher levels of ethnolinguistic vitality would be related to less perceived stress among adolescents over and above primary coping strategies.

## 1. Methods

### 1.1 Sample and Procedure

The sample included 267 Canadian adolescents aged 15 to 18 years ( $M = 16.68$ ;  $SD = 0.65$ ) in grades 10 to 12. Adolescents were recruited from two Francophone secondary institutions in the Ottawa region (Ontario) offering grades 7-12 and participated in the study on a volunteer basis. Table 1 presents demographic information about the sample. The majority of adolescents identified as female (58.2%) and Caucasian (65.1%). The majority of adolescents lived with both biological parents (68.5%). French was the language most commonly spoken at home (mother 66.5%, father 63%). Most reported an annual household income of less than CDN \$150,000 (61.8%).

### 1.2 Measures

#### 1.2.1 Demographic Measures

A series of questions regarding demographic information about the participants were asked. The questionnaire gathered information regarding: a) gender, b) age, c) race/ethnicity, d) language spoken at home, e) family type, and f) family income. In this study, gender was used as a covariate.

### 1.2.2 Adolescents' Perceived Stress

The Perceived Stress Scale (PSS; Cohen *et al.*, 1983) was used to measure the perception of stress among adolescents (*e.g.*, “In the last month, how often have you felt that you were unable to control the important things in your life?”). This measure is composed of 10 items rated on the 5-point Likert scale ranging from 1) *never* to 5) *very often*. Positively worded items (*e.g.*, “In the last month, how often have you felt confident about your ability to handle your personal problems?”) were reversed before analyses.

### 1.2.3 Coping Strategies

The Brief-COPE (Carver, 1997; Muller & Spitz, 2003) was used to measure coping strategies among adolescents. This measure is comprised of 28 items rated on a 4-point Likert scale ranging from 1) *I haven't been doing this at all* to 4) *I have been doing this a lot*. This measure is further divided into 14 subscales including: 1) Active Coping (*e.g.*, I have been taking action to try to make the situation better;  $\alpha = .65$ ), 2) Planning (*e.g.*, I have been thinking hard about what steps to take;  $\alpha = .68$ ), 3) Positive Reframing (*e.g.*, I have been looking for something good in what is happening;  $\alpha = .74$ ), 4) Acceptance (*e.g.*, I have been learning to live with it;  $\alpha = .58$ ), 5) Humour (*e.g.*, I have been making fun of the situation  $\alpha = .69$ ), 6) Religion (*e.g.*, I have been praying/meditating;  $\alpha = .83$ ), 7) Emotional Support (*e.g.*, I have been getting emotional support from others;  $\alpha = .69$ ), 8) Instrumental Support (*e.g.*, I have been getting help and advice from people;  $\alpha = .75$ ), 9) Self-Distraction (*e.g.*, I have been turning to work or other activities to take my mind off things;  $\alpha = .59$ ), 10) Denial (*e.g.*, I have been saying to myself “this isn't real”;  $\alpha = .52$ ), 11) Venting (*e.g.*, I have been expressing my negative feelings;  $\alpha = .53$ ), 12) Substance Abuse (*e.g.*, I have been using alcohol or other drugs to make myself feel better;  $\alpha = .51$ ), 13) Behavioural Disengagement (*e.g.*, I have been giving up trying to deal with it;  $\alpha = .53$ ), 14) Self-Blame (*e.g.*, I have been criticizing myself;  $\alpha = .63$ ).

### 1.2.4 Ethnolinguistic Vitality

The Beliefs on Ethnolinguistic Vitality Questionnaire (Allard & Landry, 1994) was used as a measure of ethnolinguistic vitality defined as “the set of beliefs that could be considered representative of the beliefs and perceptions acquired as a result of one's experiences and development in one's individual network of linguistic contacts in an intergroup context.” This scale is composed of a few items measuring language use and proficiency (*e.g.*, “I speak French very well”) as well as items targeting the person's sense of belonging to the linguistic landscape (*e.g.*, “In the future, I would like to join the Franco-Ontarian community”). The version used in this study includes 20 items rated on a 5-point Likert scale ranging from *strongly disagree* 1) to *strongly agree* 5).

### 1.3 Data Analysis

Before running the analyses, data were screened for deviations from multivariate assumptions (*i.e.*, normality, linearity, heteroscedasticity). Univariate outliers were checked by transforming the total scores for each of the study variables into standardized scores and using Z scores with the cut-off value of  $\pm 3.58$ . Multivariate outliers were inspected using Mahalanobis distance and Cooks' Distance statistics (Tabachnick *et al.*, 2019). In our sample, less than 3% of values were missing across all study variables. Missing values were then imputed using EM single imputation. As the first step, an exploratory factor analysis (EFA), using principal axis factoring with Promax rotation as an extraction method, was conducted to explore the underlying factor structure of the original scales. The fit of the factor model was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. Scree plot and eigenvalues above 1.00, total variance explained, were used to determine the number of factors. Moreover, to achieve a parsimonious model (*i.e.*, fewer relevant predictors) and sufficiently representative factors, we gave preference to factor solutions that did not present cross-loadings and met the minimum requirement of three items per factor. For the factor loadings, a value of 0.40 was taken as an arbitrary threshold to distinguish between high and low factor loadings (Osborne *et al.*, 2008). Subsequently, hierarchical multiple regression was used to examine the relationship among the study variables. A probability level of .05 was used to establish statistical significance. Semipartial correlations assessed the unique contribution and effect size of each significant variable; effect sizes of .02 were considered small, .15 medium, and .35 large (Cohen, 1992). All the analyses were conducted in SPSS 28.

**Table 1**  
**Adolescents' Sociodemographic Characteristics (N = 267)**

Variable	Mean	SD	Range	Percentage
Age (years)	16.68	0.65	15-18	
<b>Gender</b>				
Female				58.2
Male				40.7
Other (not specified)				1.1
<b>Ethnicity</b>				
Caucasian				65.1
African Canadian				13.4
East Asian ( <i>e.g.</i> , Chinese, Japanese, Korean)				0.4
South Asian ( <i>e.g.</i> , Indian, Pakistani, Sri Lankan)				1.7
Middle Eastern ( <i>e.g.</i> , Egyptian, Iranian, Afghan)				5.0



<b>Ethnicity (cont'd)</b>	
Hispanic	1.7
Multiracial	4.6
First Nation	1.7
Other (not specified)	6.3
<b>Family type</b>	
Both biological parents	68.6
Adoptive parents	1.5
Foster parents	1.1
Blended family	13.0
Mother only	11.1
Father only	3.1
Other (not specified)	1.5
<b>Language spoken by the mother</b>	
French	66.5
English	18.4
Other	15.0
<b>Language spoken by the father</b>	
French	63.0
English	22.5
Other	14.5
<b>Language spoken at home</b>	
French	56.2
English	30.7
Other	13.1
<b>Annual household income (in Canadian currency)</b>	
Less than \$ 14,999	2.0
\$ 15,000 - \$ 24,999	3.4
\$ 25,000 - \$ 34,999	1.4
\$ 35,000 - \$ 49,999	4.1
\$ 50,000 - \$ 74,999	10.9
\$ 75,000 - \$ 99,999	17.0
\$100,000 - \$149,999	23.1
\$150,000 - \$199,999	13.6
\$200,000 - \$249,999	10.9
Above \$250,000	12.9

SD = standard deviation

## 2. Results

### 2.1 Exploratory Factor Analysis

Data screening procedures did not detect any violation of multivariate normality or influential cases. In the first step, a series of EFAs were conducted to test the factor structure of the study measures. For perceived stress, the overall KMO was .85 and Bartlett's test of sphericity was significant ( $\chi^2_{(45)} = 867.86, p < .001$ ). The scree test showed two factors that had an eigenvalue of 1 or more (3.83, 1.89) and accounted for 57.18% of the variance (38.31% and 18.87% respectively). The two-factor model for the perceived stress scale is presented in Table 2. Rotated factor loadings ranged from 0.51 to 0.77 (see Table 2). Most of the stress items concerning one's own reaction to one's emotions and external events loaded onto Factor 1, which was named Stress Vulnerability and indicated low levels of both internal and external loci of control (e.g., "In the last month, how often have you been upset because of something that happened unexpectedly?"). Items comprising Factor 2 concerned lack of self-confidence and efficacy in dealing with daily struggles; therefore, this factor was named Self-Distrust (e.g., "In the last month, how often have you felt confident about your ability to handle your personal problems?"). These two factors exhibited good to moderate internal consistency (Stress Vulnerability  $\alpha = .83$ ; Self-Distrust  $\alpha = .75$ ).

**Table 2**  
**Factor Loadings and Factor Structure of the Perceived Stress**  
**in the Sample of Canadian Adolescents (N = 267)**

Item number and item content	Factor 1	Factor 2 <sup>a</sup>
1. In the last month, how often have you been upset because of something that happened unexpectedly?	<b>.51</b>	-.07
2. In the last month, how often have you felt that you were unable to control the important things in your life?	<b>.76</b>	.19
3. In the last month, how often have you felt nervous and "stressed"?	<b>.77</b>	.15
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	.03	<b>.67</b>
5. In the last month, how often have you felt that things were going your way?	.27	<b>.69</b>
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	<b>.60</b>	.10
7. In the last month, how often have you been able to control irritations in your life?	.03	<b>.51</b>
8. In the last month, how often have you felt that you were on top of things?	.16	<b>.73</b>
9. In the last month, how often have you been angered because of things that were outside of your control?	<b>.67</b>	.13
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	<b>.69</b>	.26

a. Items were reversed prior to analyses to indicate higher perceived stress.

For coping, the initial analysis indicated four factors with eigenvalues above 1. However, the solution with four factors was not attainable because of the increasing number of cross-loadings and because most of the scales did not load onto a minimum of three items. For the three-factor solution, the overall KMO was .769, and Bartlett's test of sphericity was significant ( $\chi^2_{(91)} = 881.59, p < .001$ ). The scree test showed three factors that had an eigenvalue of 1 or more (3.49, 1.85, 1.52) and accounted for 49% of the variance. The three-factor model for the coping scale is presented in Table 3. Rotated factor loadings ranged from 0.44 to 0.86. Inspection of the rotated pattern matrix, however, revealed that subscales Self-Distraction and Religion had values less than .30 for all three factors. These two subscales comprised items: 1) "I have been praying/meditating (religion)", 2) "I've been trying to find comfort in my religion or spiritual beliefs (religion)", 3) "I've been turning to other activities to take my mind off things (self-distraction)", and 4) "I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping." These variables were also conceptually problematic in that it is unclear if they adequately fit in any of the factors. As such, these subscales were excluded from the three confirmed factors. Factor 1 accounted for 25.24% of the variance with an eigenvalue of 3.63 and pertained to positive coping strategies, including Active Coping, Planning, Positive Refrain and Acceptance subscales; therefore, it was named Adaptive Coping. This factor exhibited moderate internal consistency ( $\alpha = .76$ ). Three subscales loaded on Factor 2, namely Emotional Support, Instrumental Support and Venting. These items indicate seeking social support and were defined as Seeking Social Support. This factor demonstrated good internal consistency ( $\alpha = .81$ ). Finally, Factor 3 included strategies that are deemed negative: Denial, Substance Abuse, Behavioural Disengagement and Self-Blame; therefore, it was defined as Maladaptive Coping. This factor revealed moderate internal consistency ( $\alpha = .73$ ).

For ethnolinguistic vitality, the solution was interpretable up to four factors (see Table 4). The four-factor solution showed the clearest differentiation and accounted for 54.36% of the variance in ethnolinguistic vitality. The overall KMO was .733, and Bartlett's test of sphericity was significant, ( $\chi^2_{(190)} = 1850.10, p < .001$ ). We created subscales based on the four-factor structure (see Table 4). Rotated factor loadings ranged from 0.41 to 0.78. Most of the French language items loaded onto Factor 1, which accounted for 23.81% of the variance and had an eigenvalue of 4.79. We named this factor Francophone Language Vitality, given its focus on French language abilities and frequency of use (e.g., "With my friends, I speak only French"). This factor exhibited good internal consistency ( $\alpha = .83$ ). Most of the English language items loaded onto Factor 2, which accounted for 13.58% of the variance and had an eigenvalue of 2.71. One of the French language items (item 5: "I speak French very well") had a modest negative loading (-.56). Moreover, item 2 "I consider myself part of the Anglo-Ontarian community" loaded on both Factor 1 and Factor 2; for these reasons, this item was excluded from the analyses. We named this factor Anglophone Language

**Table 3**  
**Factor Loadings and Factor Structure of Coping**  
**in the Sample of Canadian Adolescents (N = 267)**

Subscales	Factor 1	Factor 2	Factor 3
Active Coping	<b>.68</b>	.20	-.17
Planning	<b>.56</b>	.32	.01
Positive Refrain	<b>.77</b>	.06	.01
Acceptance	<b>.57</b>	.18	.10
Humour	<b>.57</b>	.18	.10
Religion	.26	.05	.14
Emotional Support	.07	<b>.86</b>	.09
Instrumental Support	.14	<b>.77</b>	.15
Self-Distraction	.30	.12	.23
Denial	.11	-.01	<b>.55</b>
Venting	.19	<b>.56</b>	.21
Substance Abuse	-.07	.04	<b>.33</b>
Behavioural Disengagement	.08	.18	<b>.54</b>
Self-Blame	.19	.24	<b>.44</b>

Vitality, given its focus on English language abilities and frequency of use (*i.e.*, “At home, I only speak English”). This factor showed acceptable internal consistency ( $\alpha = .67$ ). Most of the items concerning adolescents’ use of the English language in daily activities, such as shopping and the media, loaded onto Factor 3, which accounted for 9.43% of the variance and had an eigenvalue of 1.88. We named this factor Shopping and Media Use in English (*e.g.*, “When I shop, I only speak English with the sellers”; “The movies and TV and radio shows that I listen to are only in English”). This factor demonstrated acceptable internal consistency ( $\alpha = .69$ ). Most of the items concerning adolescents’ sense of belonging to both Anglophone and Francophone communities loaded onto Factor 4, which accounted for 7.55% of the variance and had an eigenvalue of 1.51. We named this factor Bilingual Identity because of its focus on belonging to both language groups (*e.g.*, “In the future, I would like to join the Anglo-Ontarian community”; “I consider myself part of the Franco-Ontarian community”). This factor revealed acceptable internal consistency ( $\alpha = .60$ ).

## 2.2 Descriptive Statistics

Participants’ mean score on both Stress Vulnerability ( $M = 19.33$ ;  $SD = 5.65$ ) and Self-Distrust ( $M = 12.02$ ;  $SD = 5.65$ ) were relatively moderate and located at the midpoint of the scale (which could range from 6-30 for Stress Vulnerability and 4-20 for Self-Distrust).

**Table 4**  
**Factor Loadings and Factor Structure of the Ethnolinguistic Vitality**  
**in the Sample of Canadian Adolescents (N = 267)**

Item number and item content	Factor 1	Factor 2	Factor 3	Factor 4
1. I consider myself part of the Franco-Ontarian community.	.10	-.15	.03	<b>.56</b>
2. I consider myself part of the Anglo-Ontarian community.	-.49	.42	.13	.27
3. In the future, I would like to join the Franco-Ontarian community.	-.29	.27	.13	<b>.41</b>
4. In the future, I would like to join the Anglo-Ontarian community.	-.32	.27	.13	<b>.41</b>
5. I speak French very well.	.12	<b>-.56</b>	.01	.18
6. I speak English very well.	<b>-.48</b>	.11	.30	.05
7. At home, I only speak French.	<b>.66</b>	-.26	-.05	.15
8. At home, I only speak English.	-.11	<b>.54</b>	.32	-.13
9. At school, I only speak French.	<b>.63</b>	-.23	.26	-.04
10. At school, I only speak English.	-.06	<b>.54</b>	.30	-.02
11. With my friends, I speak only French.	<b>.78</b>	-.12	.10	-.01
12. With my friends, I speak only English.	-.04	<b>.57</b>	.36	-.03
13. In my social activities, I only speak French.	<b>.76</b>	-.08	.10	.09
14. In my social activities, I only speak English.	.08	<b>.51</b>	.07	.01
15. When I shop, I only speak French with the sellers.	<b>.55</b>	.07	-.18	-.03
16. When I shop, I only speak English with the sellers.	-.02	.27	<b>.48</b>	.11
17. The movies and TV and radio shows that I listen to are only in French.	<b>.59</b>	.20	-.32	.04
18. The movies and TV and radio shows that I listen to are only in English.	-.04	.19	<b>.66</b>	-.01
19. The books, newspapers and magazines I read are only in French.	<b>.60</b>	.11	-.23	.02
20. The books, newspapers and magazines I read are only in English.	-.13	.23	<b>.58</b>	-.01

Concerning coping, adolescents scored relatively high on Adaptive Coping ( $M = 25.28$ ;  $SD = 6.02$ ) considering the theoretical range of the scale (5-40). On average, participants reported relatively moderate levels of Maladaptive Coping ( $M = 13.96$ ;  $SD = 3.64$ ) and Seeking Social Support ( $M = 13.96$ ;  $SD = 3.64$ ), with average scores located at the midpoint of the scales (which could range from 3-24 for both Maladaptive Coping and Seeking Social Support). Concerning the ethnolinguistic factors, participants reported moderate levels of Francophone Language Vitality ( $M = 19.41$ ;  $SD = 6.35$ ), and higher levels of Anglophone Language Vitality ( $M = 15.46$ ,  $SD = 4.13$ ) and Bilingual Identity ( $M = 9.79$ ,  $SD = 2.55$ ), as demonstrated by scores at the midpoints of the scales (which could range from 8-40

for Francophone Language Vitality; 5-25 for Anglophone Language Vitality and 3-15 for Bilingual Identity and Shopping and Media Use in English). Slightly higher levels of Shopping and Media Use in English ( $M = 11.48$ ;  $SD = 2.86$ ) were recorded considering the theoretical range of the scale.

Table 5 presents the correlation matrix. There was a significant positive correlation between Stress Vulnerability and Self-Distrust, showing that adolescents reporting high vulnerability to stress (defined as low internal-external loci of control) also reported high levels of self-distrust. There was also a significant negative correlation between the variables Stress Vulnerability and both Maladaptive Coping, and Seeking Social Support, revealing that adolescents' stress vulnerability was related to greater use of maladaptive coping strategies and seeking social support. Stress Vulnerability was also associated with Bilingual Identity, indicating that adolescents who identify as being both Francophone and Anglophone reported a higher vulnerability to stress.

Self-Distrust was significantly negatively related to Adaptive Coping and significantly positively related to Maladaptive Coping, showing that adolescents reporting high levels of self-distrust reported less frequent use of adaptive coping strategies and greater use of maladaptive coping strategies. Adaptive Coping was significantly negatively related to Maladaptive Coping and positively related to Seeking Social Support, indicating that adolescents who reported frequent use of adaptive coping strategies also reported a higher frequency of seeking social support, but less frequent use of maladaptive coping strategies. Maladaptive Coping was significantly positively related to Seeking Social Support, indicating that adolescents who reported frequent use of maladaptive coping strategies also sought social support. Seeking Social Support was also significantly positively related to Bilingual Identity, revealing that adolescents who identify as being both Francophone and Anglophone reported a higher frequency of seeking social support. Moreover, Francophone Language Vitality was significantly negatively related to Anglophone Language Vitality and Shopping and Media Use in English, showing that adolescents who frequently used French in a variety of social settings tended to report less frequent use of English in similar contexts and also reported less frequent use of English in the media and daily activities such as shopping. Shopping and Media Use in English were significantly positively related to Anglophone Language Vitality, revealing that adolescents reporting frequent use of English in the media also frequently used English in the social context.

**Table 5**  
**Correlation Matrix of all Study Variables**

Variable	1	2	3	4	5	6	7	8	9
1. Stress Vulnerability	—								
2. Self-Distrust	.30***	—							
3. Adaptive Coping	-.01	-.45***	—						
4. Maladaptive Coping	.39***	-.18**	-.17**	—					
5. Seeking Social Support	.38***	-.06	.27***	.26***	—				
6. Francophone Language Vitality	.05	-.07	.05	.10	.08	—			
7. Anglophone Language Vitality	-.06	-.02	.10	.03	.05	-.20**	—		
8. Shopping and Media Use in English	.10	.03	.07	.06	.01	-.18**	.47***	—	
9. Bilingual Identity	.13*	-.04	.07	-.03	.14*	-.02	.09	.08	—

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

### 2.3 Regression Results

A three-stage hierarchical multiple regression was conducted predicting adolescents' stress vulnerability and self-distrust from coping and ethnolinguistic factors in addition to the use of gender as a covariate. Adolescent gender was entered at stage 1 as the control variable. The coping variables (maladaptive, adaptive and social support seeking) were entered at stage 2 and ethnolinguistic factors at stage 3. Concerning adolescents' stress vulnerability, adolescent gender (entered at stage 1) contributed significantly to the regression model,  $F(1, 229) = 42.06$ ,  $p < .001$ ) and accounted for 15% of the variation in this outcome. Introducing coping strategies at stage 2, these variables explained an additional 22% of the variation in adolescents' stress vulnerability, and this change in  $R^2$  was significant,  $F(3, 226) = 33.72$ ,  $p < .001$ . For this set of predictors, results indicated that lower levels of adolescents' stress vulnerability were significantly predicted by adaptive coping strategies ( $\beta = -.33$ ,  $SE = 0.06$ ,  $p < .001$ ); medium effect size was found for this effect (Part  $r = -.27$ ). Conversely, maladaptive coping ( $\beta = .52$ ,  $SE = 0.09$ ,  $p < .001$ ) predicted higher levels of adolescents' stress vulnerability; with a large effect size for this predictor (Part  $r = .38$ ). The addition of ethnolinguistic factors at stage 3 contributed an additional 2.3% of variation in adolescents' stress vulnerability and constituted a significant change in  $R^2$  ( $F(4, 222) = 3.023$ ,  $p < .019$ ). Both Francophone Language Vitality ( $\beta = -.11$ ,  $SE = 0.05$ ,  $p = .048$ ) and Anglophone Language Vitality ( $\beta = -.14$ ,  $SE = 0.06$ ,  $p = .018$ ) predicted lower levels of adolescents' stress vulnerability. The effect sizes for these two predictors were both small (Part  $r = -.10$  for Francophone Language Vitality, and Part  $r = -.12$  for Anglophone Language Vitality).

With respect to adolescents' self-distrust, gender (entered at stage 1) accounted for a variance of 5%, and this change in  $R^2$  was significant ( $F(1, 229) = 13.18, p < .001$ ). Moreover, coping predictors at stage 2 accounted for an additional variance of 19% in self-distrust, and this change in  $R^2$  was deemed significant ( $F = 3, 226 = 19.21, p < .001$ ). Lower levels of adolescents' self-distrust were significantly predicted by adaptive coping strategies ( $\beta = -.46, SE = 0.09, p < .001$ ), whereas maladaptive coping ( $\beta = .49, SE = 0.08, p < .001$ ) predicted higher levels of adolescents' self-distrust. Large effect sizes were found for these two variables (Part  $r = -.33$  for Adaptive Coping and Part  $r = .40$  for Maladaptive Coping). The addition of ethnolinguistic predictors at stage 3 did not contribute to any significant variation in the outcome ( $F(4, 222) = 0.78, p = .574$ ). None of the ethnolinguistic factors were significant predictors of self-distrust.

### 3. Discussion

The scope of this study was to determine how Francophone adolescents cope with stress and the role that their ethnolinguistic identity plays in this relationship (*i.e.*, stress-coping). In the current study, adaptive coping strategies predicted lower levels of adolescents' perceived stress vulnerability evidenced by inefficient regulation of both internal and external loci of control. Conversely, maladaptive coping strategies predicted increased levels of adolescents' perceived stress vulnerability and self-distrust. Adaptive coping strategies predicted decreased stress vulnerability and self-distrust. These findings are in line with the results of Compas *et al.*'s (2017) meta-analytic study and corroborate the idea that coping tends to be polarized into negative and positive strategies.

Turning to the ethnolinguistic vitality factors, both Francophone and Anglophone linguistic vitality had a unique role in predicting lower levels of adolescents' stress vulnerability over and above coping strategies. These findings corroborate previous research on the beneficial effect of ethnolinguistic vitality on psychological well-being status (Dragojevic *et al.*, 2018). This also corroborates previous findings from a study conducted by Gaudet and Clément (2005, 2009) on Francophones residing in the Canadian province of Saskatchewan. The authors found that both contact and confidence in the English and French language contributed to identification with the corresponding group, which in turn led to better psychological adjustment (Gaudet & Clément, 2005, 2009).

Interestingly, adolescents who both maintained the language of the minority group (*i.e.*, French) and also frequently used English in a variety of social contexts (*e.g.*, family, school, friends) reported lower levels of stress vulnerability. In this case, Francophone adolescents (Franco-Ontarian) who are proficient in both French and English and use both official languages daily either at home or in the community may be easily integrated into the dominant Anglophone society, and that sense of social integration might contribute to



lowering their stress. However, there is no definitive explanation for this relationship given the scarcity of research on this specific topic. Future research on these relationships—and potential mediating mechanisms—is warranted.

Surprisingly, none of the ethnolinguistic factors predicted perceived self-distrust. This could be explained by the fact that this construct relies on typical intrinsic characteristics such as low confidence in one's future and self-control, which are somewhat a different and more self-reflective aspect of perceived stress. Despite its plausibility, such an explanation is not exhaustive, further research is required for a more in-depth examination of the construct of self-distrust to determine to what extent it is related to ethnolinguistic vitality.

In sum, these results raise awareness of the role of ethnolinguistic vitality and language use in contributing to a decrease in the stress perceived by adolescents in a minority language setting. Franco-Ontarian adolescents face unique challenges due to the pressure from Francophone communities to maintain their linguistic and cultural heritage as well as their natural attraction to opportunities available in the dominant Anglophone community. This intersection of the two languages and identities (*i.e.*, Francophone and Anglophone) has a key role in determining youth adaptation in a diverse context (Drolet *et al.*, 2010). In this regard, fostering Francophone language vitality while maintaining a strong Anglophone language vitality can contribute to better psychosocial well-being.

### **3.1 Limitations**

Several study limitations need to be considered when interpreting the results. First, this study did not differentiate between Francophones and Anglophones, and it was limited to the province of Ontario. Moreover, it is cross-sectional in that data was collected at a single point in time. Future longitudinal studies are required to make comparisons over time to track relevant trends associated with the three main constructs of perceived stress, coping and ethnolinguistic vitality across provinces. Second, given the correlational nature of the study, it is not possible to draw causal inferences. It would seem important for additional research to consider conducting controlled experiments to test the presence of cause-and-effect relationships. Furthermore, the self-reports that were employed may be subject to response biases and other cognitive distortions. Future research may consider the use of mixed methods to replicate our current results. Finally, the sample was not randomly selected, and this might have contributed to selection biases. Additional research should attempt to recruit participants randomly across different institutions to avoid selection biases.

### **3.2 Implications and Future Research Avenues**

Historically, Francophones have had to fight for their linguistic rights and have been marginalized both in schools and other professional and private institutions in the first

half of the twentieth century. Moreover, Francophones in Ontario face a double minorization both linguistically and culturally, due to the dominance of Anglophone society and the English way of life (Benoit *et al.*, 2018). From this perspective, being part of a linguistic minority (and being marginalized because of linguistic differences) can be perceived as a source of stress for adults and adolescents alike (Cano *et al.*, 2015; Lorenzo-Blanco & Unger, 2015).

The study findings attest to the importance of maintaining sociolinguistic vitality in French and English to decrease stress vulnerability among Franco-Ontarian adolescents. If strong language vitality in both official languages is an effective buffer against stress and maladaptive coping strategies, school programs and government policies should focus on implementing a curriculum that incorporates these two ethnolinguistic realms. The results of this study lend themselves to other ethnolinguistic environments around the world where bilingualism plays a prominent role. Moreover, the ramifications of this study should also be examined in other contexts outside Canada to gain a better understanding of the relationship between stress, coping, language and culture among adolescents.

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## Keywords

ethnolinguistic vitality, stress, coping, adolescents

## Mots clés

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